

REMARKS

Claims 1-23 are pending. Upon entry of the present amendment, claims 1-3 and 5-25 will be pending, claims 1-3, 7-16, 18, 19, 21, and 22 having been amended, claim 4 canceled, and claims 24 and 25 added by way of the present amendment.

Preliminary Amendment

The Office Action mistakenly asserts that the marked-up copy of the claims in the Preliminary Amendment of January 3, 2002 does not correspond with Applicants' remarks that claims 3-7, 9, 10, 12-15, and 17 have been amended. However, claims 3-7, 9, 10, 12-15, and 17 were indeed amended with the removal of multiple dependency. Applicants point out that the underlining of the genera in claims 4-6, 8-15, 20, and 21 are not amendments, but are commonly accepted indicators of genera in written documents. However, for the sake of clarification, Applicants have replaced the underlining with italicizing in the present amendment. As a result of the preliminary amendment, the claim set without multiple dependent claims should be examined in this application.

Priority

Applicants point out that, in accordance with U.S. practice and procedure, certified copies of the priority documents for this national stage application are to be forwarded to the U.S. Patent and Trademark Office by the International Bureau, rather than Applicants. The U.S. Patent and Trademark Office should contact the International Bureau to obtain the certified copies.

Information Disclosure Statement

Applicants submitted a copy of the Japanese reference JP 10-108682 and an English abstract as indicated in the Information Disclosure Statement filed March 26, 2002. However, for the Examiner's convenience, resubmitted herewith is a copy of the IDS, reference, and English abstract. Since the English abstract was properly submitted previously, no fees are due for the resubmission.

Abstract

Submitted herewith in an amended Abstract to attend to the objected-to matters.

Claim Objections

Claims 3, 9, 10, 12, 13, 15, and 16 were objected to for reciting acronyms without first properly defining them. Claim 3 has been amended to delete the objected-to term “P(3HB-co-3HH).” Claims 15 and 16 have been amended to replace the objected to term “PHA” with “polyhydroxyalkanoate.”

The objected-to terms “ALK1” in claims 12 and 13, “ALK3” in claim 9, and “XPR2” in claim 10 are not acronyms, but are formal technical terms recognized by persons of ordinary skill in the art, where “ALK3” and “ALK1” represent genes encoding P450 enzymes and “XPR2” represents a gene encoding an alkaline extracellular protease. Hence, no correction is required.

112, 2nd Paragraph, Rejections

Claims 1-23 were rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite. Claim 1 has been amended to delete the rejected phrase “kind of” and to recite that the gene expression cassette comprises a promoter and a terminator, along with an enzyme gene.

Claims 2 and 3 have been amended to replace “the polyester” with “a polyester” to address the antecedent basis rejection.

Claims 7-15 and 19-21 were amended to replace the rejected phrase “derived from” with “isolated from.”

Claim 15 was amended to clarify the rejected language of “a PHA gene and (R)-specific enoyl-CoA hydratase gene.”

Claim 18 was amended to replace the rejected language with the suggested amendments.

Accordingly, the rejections are overcome.

112, 1st Paragraph, Rejections

Claims 18-23 were rejected under 35 U.S.C. 112, 1st paragraph, as failing to provide

enablement for modified CTG codons in a polyester synthesis-associated enzyme gene in any organism.

Claim 18 as amended recites “said gene functions in a yeast which translates the codon CTG into serine.” The amendment finds support in the specification, page 8, lines 20-25, and provides enablement for the claimed modified CTG codons of the enzyme gene in a yeast. Accordingly, the rejections are overcome.)

102(b) Rejections

Claims 1, 2, 4, 7-15, and 17-21 were rejected under 35 U.S.C. 102(b) as being anticipated by Leaf (*Microbiology*, 1996; 142:1169-80). Applicants traverse the rejections.

Claim 1 as amended is directed to a transformant in which “at least one gene expression cassette...has been introduced into a yeast which belongs to any of the genera *Candida*, *Hansenula*, *Kluyveromyces*, *Phaffia*, *Pichia*, *Schizosaccharomyces*, *Schwanniomyces*, *Trichosporon*, and *Yarrowia*.”

In contrast, Leaf merely discloses a polyhydroxybutylate synthase gene used to construct a yeast plasmid, which enables expression of the functional synthase enzyme in *Saccharomyces cerevisiae*. See Leaf, Abstract. Leaf does not disclose the claimed transformant derived from the genera of yeast recited in claim 1. Hence, claim 1 and its dependent claims are patentable over Leaf.

Claim 18 as amended is directed to modified genes. In contrast, Leaf does not disclose the claimed modified gene at all. Hence, claim 18 and its dependent claims are patentable over Leaf.

Claims 1-4, 7-15, and 17-21 were rejected under 35 U.S.C. 102(b) as being anticipated by Fukui (U.S. Patent No. 5,981,257). Applicants traverse the rejections.

Claim 1 as amended is directed to the transformant in which at least one gene expression cassette comprises a polyester synthesis-associated enzyme gene, a promoter and a terminator introduced into a yeast which belongs to any of the genera, as listed above.

In contrast, Fukui discloses a transformant obtained by introducing a recombinant vector, containing a promoter, into a host compatible with an expression vector used in constructing the recombinant vector. See Fukui, col. 4, lines 17-26, 47-49. Fukui fails to disclose a terminator, as

recited in claim 1. Hence, claim 1 and its dependent claims are patentable over Fukui.

Claim 18 and its dependent claims are patentable over Fukui because Fukui does not disclose the modified gene of claim 18 at all.

CONCLUSION

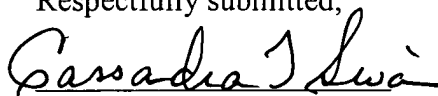
Claims 1-3 and 5-25 are allowable.

The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 11-0600.

Date: November 8, 2004

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Cassandra T. Swain".

Cassandra T. Swain, Ph.D.

Registration No. 48,361

KENYON & KENYON
1500 K Street, NW, Suite 700
Washington, D.C. 20005-1257
Tel.: (202) 220-4200
Fax: (202) 220-4201